

TEXAS DIABETES

The Newsletter of the Texas Diabetes Council



Number of Texans with Diabetes Projected to Quadruple by 2040

On November 30, 2010, the Texas Health Institute (THI) released projections developed by the state demographer which estimate that, by 2040, almost 8 million adult Texans will have diabetes, or 24 percent of the adult population. Current state estimates of prevalence based on the BRFSS survey (see page 2), indicate that about 1.7 million Texas adults (9.3%) now have diagnosed diabetes.

The new projections not only take into account current diabetes prevalence rates and projected demographic changes, but also incorporate recent patterns in incidence rates, differences in mortality between people with and without diabetes, and projected obesity rates.

According to the Office of the State Demographer, new cases of diabetes have increased dramatically in the past decade. During the period from 1995-1997 to 2005-2007, the age adjusted incidence rate for diabetes more than tripled, increasing from 3.6 to 11.1 per 1,000 persons in Texas. The majority of persons with diagnosed diabetes are currently Anglos, while diabetes rates are higher for African Americans and Latinos. Older Texans and Latinos are the fastest growing populations in the state, accounting for most of the projected change. The resulting shift in prevalence by race/ethnicity is illustrated in Table 1.

A THI report, *Responding to the Epidemic: Strategies for Improving Diabetes Care in Texas*, features the state demographer's prevalence projections by county, and lays out strategies for addressing diabetes in Texas developed with input from three regional diabetes health disparities roundtables held across the state between November, 2008, and January, 2010. The report can be viewed at texashealthinstitute.org.

About Texas Health Institute

THI is a 501(c)(3) non-profit organization committed to finding feasible solutions to Texas' health policy problems. The mission of THI is to provide leadership to improve the health of Texans and their communities through education, research and health policy development. THI currently holds advisory membership on the Texas Diabetes Council's Advocacy and Outreach Committee.

The projections included in the report from the state demographer were funded by the Methodist Healthcare Ministries of South Texas, Inc. An interactive map on the Texas Tribune web site illustrates projected prevalence of diabetes by county at: <http://www.texastribune.org/library/data/texas-diabetes-rates/>. ■

Table 1. Projected number of adults with diabetes by race/ethnicity in Texas, 2007 to 2040

| | 2005/2007 | 2010 | 2020 | 2030 | 2040 |
|------------------|------------------|------------------|------------------|------------------|------------------|
| Anglo | 774,863 | 970,511 | 1,482,505 | 1,759,011 | 1,839,848 |
| African-American | 256,448 | 321,216 | 516,220 | 673,035 | 805,228 |
| Latino | 648,766 | 855,285 | 1,718,359 | 2,983,099 | 4,718,404 |
| Other | 52,369 | 74,716 | 186,911 | 368,336 | 616,746 |
| TOTAL | 1,732,447 | 2,221,727 | 3,903,995 | 5,783,481 | 7,980,225 |

FALL 2010-
WINTER 2011

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TEXAS DIABETES
COUNCIL

Annual Prevalence and Mortality Update

Each fall the Texas Department of State Health Services Diabetes Prevention and Control Branch provides prevalence estimates and mortality data related to diabetes in Texas for the most recent year(s) available. The Texas Diabetes Fact Sheet, as well as other data summaries can be found at <http://www.dshs.state.tx.us/diabetes/tdcdata.shtm>. Youth diabetes prevalence estimates were published in the Summer 2010 issue of *Texas Diabetes*.

I. Adult Prediabetes Prevalence, 2009

Based on National Health and Nutrition Examination Surveys (NHANES) and other national data sources, an estimated 79 million, or 35 percent of American adults aged 20 and older have prediabetes.¹

In Texas, the state Behavioral Risk Factor Surveillance System (BRFSS) began collecting prediabetes prevalence data in 2009. Respondents to the annual BRFSS phone survey, which provides estimates of diabetes prevalence for the state and nation, are now asked the following question:

Have you ever been told by a doctor or other health professional that you have prediabetes or borderline diabetes?

Data collected during this initial year indicates that almost **1 million** persons aged eighteen years and older in Texas (**5.4%** of this age group) have been diagnosed with prediabetes. An important distinction between Texas BRFSS and national prevalence estimates is that the national prediabetes estimate reflects the results of both fasting glucose and A1c testing of the sample population, capturing both the diagnosed and undiagnosed prediabetes population. Texas BRFSS data is self-reported, capturing only those who have been diagnosed.

Diagnosed Prediabetes Prevalence by Sex, Texas Adults²

| | |
|---------|------|
| Male: | 4.9% |
| Female: | 5.9% |

Diagnosed Prediabetes Prevalence by Race/Ethnicity, Texas Adults²

| | |
|----------------------|------|
| White, non-Hispanic: | 5.2% |
| Black, non-Hispanic: | 6.7% |
| Hispanic: | 4.9% |
| Other: | 8.0% |

Diagnosed Prediabetes Prevalence by Age Group, Texas Adults²

| | |
|--------------|------|
| 18-29 Years: | 3.0% |
| 30-44 Years: | 4.1% |
| 45-64 Years: | 7.5% |
| 65+: | 7.1% |

Diagnosed Prediabetes Prevalence by Educational Level in Persons 18 and Older²

| | |
|-------------------------|------|
| No High School Diploma: | 3.4% |
| High School Graduate: | 5.6% |
| Some College: | 7.3% |
| College +: | 6.4% |

Diagnosed Prediabetes Prevalence by Race/Ethnicity and Age Group, Texas Adults²

| Age Group | White, non-Hispanic (%) | Black, non-Hispanic (%) | Hispanic (%) | Other (%) | All Races (%) |
|----------------|-------------------------|-------------------------|--------------|------------|---------------|
| 18 – 44 | 2.7 | 4.4 | 4.0 | 7.2 | 3.7 |
| 45 – 64 | 7.0 | 8.9 | 7.3 | 11.5 | 7.5 |
| 65+ | 7.4 | 11.2 | 4.7 | 4.4 | 7.1 |
| Overall | 5.2 | 6.7 | 4.9 | 8.0 | 5.4 |

II. Adult Diabetes Prevalence, 2009

In the U.S., an estimated 25.8 million persons (8.3%) have diabetes (all ages, diagnosed and undiagnosed).¹

In Texas, an estimated 1.7 million persons aged eighteen and older (9.3%) have been diagnosed with diabetes.² Another 440,468 persons in this age group are believed to have undiagnosed diabetes (based on 2003-2006 NHANES age-adjusted prevalence estimates of 2.5% of persons twenty years of age and older).³ The total for both diagnosed and undiagnosed diabetes in Texas is 2.1 million.

Diagnosed Diabetes Prevalence by Sex, Texas Adults²

| | |
|---------|-------|
| Male: | 10.0% |
| Female: | 8.6% |

Diagnosed Diabetes Prevalence by Race/Ethnicity, Texas Adults²

| | |
|----------------------|-------|
| White, non-Hispanic: | 8.0% |
| Black, non-Hispanic: | 14.4% |
| Hispanic: | 9.7% |
| Other: | 9.2% |

Diagnosed Diabetes Prevalence by Race Ethnicity and Age Group, Texas Adults²

| Age Group | White, non-Hispanic (%) | Black, non-Hispanic (%) | Hispanic (%) | Other (%) |
|----------------|-------------------------|-------------------------|--------------|------------|
| 18 – 44 | 2.1 | 6.3 | 4.5 | 4.1 |
| 45 – 64 | 11.0 | 20.9 | 16.8 | 15.0 |
| 65+ | 16.5 | 29.6 | 30.6 | 25.1 |
| Overall | 8.0 | 14.4 | 9.7 | 9.2 |

II. Adult Diabetes Prevalence, 2009 (continued)

Diagnosed Diabetes Prevalence by Age Group, Texas Adults²

| | |
|--------------|-------|
| 18-29 Years: | 0.7% |
| 30-44 Years: | 5.2% |
| 45-64 Years: | 13.7% |
| 65+: | 20.7% |

Diagnosed Diabetes Prevalence by Educational Level, Texas Adults²

| | |
|-------------------------|-------|
| No High School Diploma: | 11.2% |
| High School Graduate: | 10.2% |
| Some College: | 10.3% |
| College +: | 7.1% |

¹Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

²2009 Texas Behavioral Risk Factor Surveillance System statewide survey of persons eighteen years of age and older. Data include both type 1 and type 2 diabetes. Persons with diabetes include those who report that they have been told by a doctor or other healthcare professional that they have diabetes. Persons with prediabetes include those who have been told by a doctor or other healthcare professional that they have prediabetes or borderline diabetes. Women and girls who report diabetes or prediabetes only during pregnancy are not included in prevalence.

³Persons 20 years of age and older. Centers for Disease Control and Prevention. Prevalence of Diabetes and Impaired Fasting Glucose in Adults, United States, 1999-2000. MMWR. September 5, 2003; 52 (35): 833-837.

⁴Texas Department of State Health Services, Texas Vital Statistics. Data include male and female, and all ages.

III. Diabetes Mortality

Diabetes was the sixth leading cause of death in Texas in 2002 through 2007. In 2007, 5,105 deaths were directly attributed to diabetes. Nationally, diabetes was the seventh leading cause of death in 2007. Diabetes is believed to be under-reported on death certificates in Texas and the nation, both as a condition and as a cause of death.

The map below shows the age-adjusted mortality rates per 100,000 persons for Texas by county for the years 2004 through 2007, with diabetes as the underlying cause of death. The state rate for the four years is **27.8 per 100,000**. A number of counties in Health Service Regions 8 and 11 had significantly higher diabetes mortality rates than the state rate. Many counties along the eastern part of the state had higher diabetes

mortality rates, but these rates were not significantly different than the rate for the state as a whole.

Diabetes Mortality Rate (Per 100,000) by Race/Ethnicity, Texas, 2007⁴

The 2007 diabetes mortality rate for Texas was 26 deaths per 100,000 persons. Mortality rates by race/ethnicity in 2007 were:

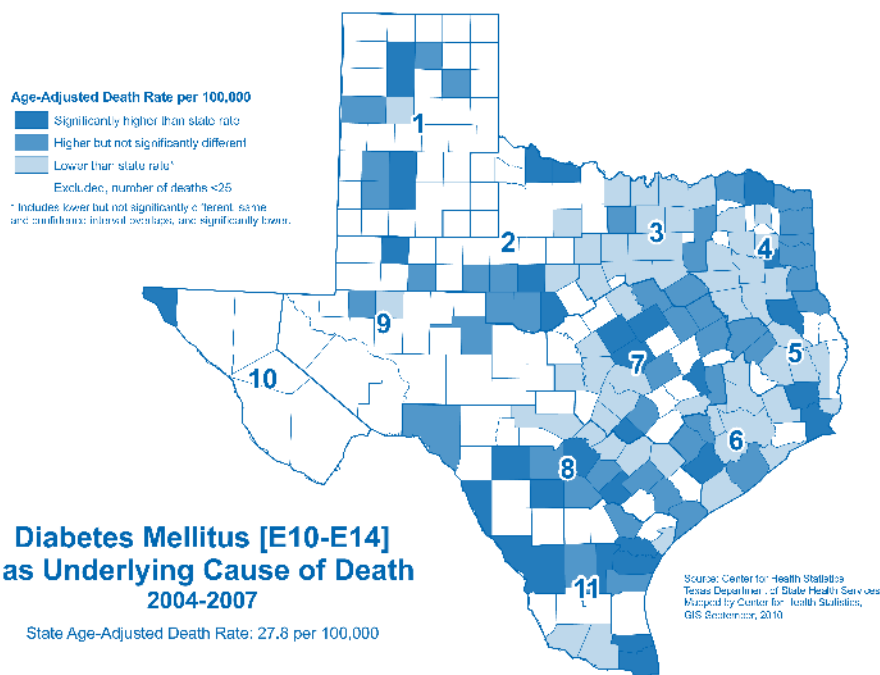
- 19 per 100,000 non-Hispanic whites
- 40 per 100,000 Hispanics
- 46 per 100,000 non-Hispanic blacks
- 22 per 100,000 persons who fall in the "Other" category

The 2007 mortality rates (per 100,000) for non-Hispanic blacks and Hispanics were more than double that of non-Hispanic whites. ■

New Spanish-language Toolkit Helps Teach Primary Prevention Messages

The National Diabetes Education Program's new toolkit, the Kit **El camino hacia la buena salud** was developed for those who work with Hispanics/Latinos at risk of type 2 diabetes. With input from diabetes educators, community health workers and promotores, the kit offers a variety of tools that promote the prevention of type 2 diabetes with an emphasis on healthy food choices and increased physical activity.

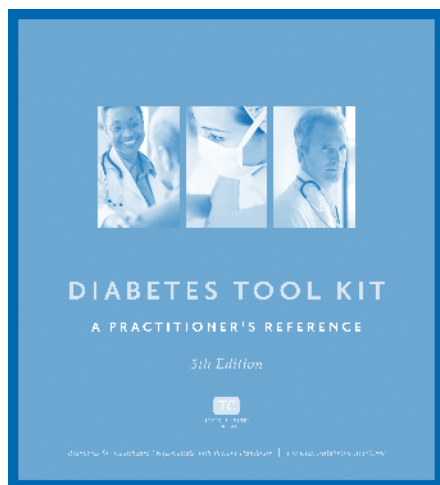
Visit <http://ndep.nih.gov/whats-new/posting.aspx?id=32> to download components of the Kit, or order online.



Diabetes Tool Kit: 5th Edition Updates

The 5th edition of the TDC's Diabetes Tool Kit was first published in August 2009. In August 2010, this edition was updated to include revised treatment algorithms approved by the Texas Diabetes Council after initial printing. Since August, additional algorithm revisions have been made. Tool kit users are encouraged to update the pages of their tool kits related to the following algorithms at tdctoolkit.org/algorithms_and_guidelines.asp:

- **Glycemic Control Algorithm for Type 2 Diabetes Mellitus in Adults** (formerly Glycemic Control Algorithm for Type 2 Diabetes Mellitus in Children and Adults) *Revised 07/22/2010*
- **Insulin Algorithm for Type 1 Diabetes Mellitus in Children and Adults** *Revised 01/27/2010*
- **Insulin Algorithm for Type 2 Diabetes Mellitus in Children and Adults** *Revised 10/28/2010, Worksheet revised 01/27/2010*
- **Diabetes Medical Nutrition Therapy and Prevention Algorithm for Adults** (formerly Medical Nutrition Algorithm IFG/Type 2 Diabetes Prevention and Therapy) *Revised 07/22/2010*



Visit www.tdctoolkit.org to order or update your Diabetes Tool Kit today! ■

Competitive Bidding is Here! How Will Your Patients Be Affected?

On January 1, 2011, Medicare implemented a new program that impacts beneficiaries in the **Dallas-Fort Worth-Arlington area** who have diabetes and test their blood glucose levels. Under Medicare's new Competitive Bidding Program (CBP), beneficiaries who reside in this area and who purchase blood glucose testing strips and other related supplies from mail order suppliers may do so only from approved Medicare contract suppliers. Patient advocates have expressed concern that, under the CBP, mail order suppliers may have economic incentives to limit the range of product offerings, and may attempt to persuade beneficiaries to switch to lower cost testing systems.

Some safeguards have been included in the CBP to help beneficiaries get the equipment and supplies necessary to avoid an adverse medical outcome—with assistance from their healthcare providers. If a patient needs a specific brand of equipment or supplies, a doctor must prescribe the specific brand or form in writing and document in the medical record that the specific item or supply is needed for medical reasons. In these situations, a Medicare contract supplier is required to

- furnish the exact brand or form of item prescribed;
- help find another contract supplier that offers that brand or form; or
- work with the patient's doctor to find an alternate brand or form that is safe and effective.

Contract suppliers must furnish the item as originally prescribed if a revised prescription is not obtained, or another supplier cannot be found that offers the prescribed item.

Additionally, healthcare providers can

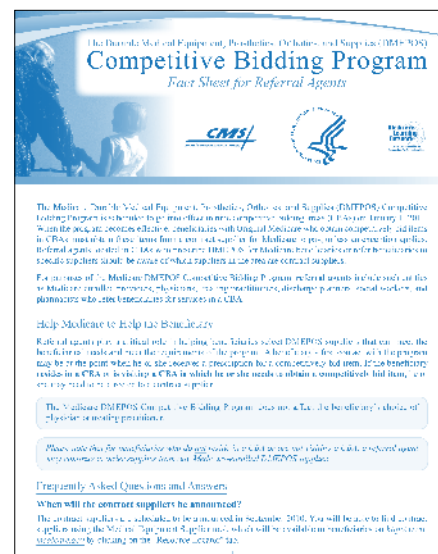
- Advise patients that they can continue to purchase diabetes testing supplies from the pharmacy of their choice. Local stores do not have to be Medicare contract

suppliers unless they're also offering diabetic supplies through the mail, although they may charge more than the CBP.

- Advise patients that, if a mail order supplier attempts to persuade the patient to choose a different testing system, the patient should (1) contact another mail order supplier, or (2) purchase their preferred replacement supplies from a retail pharmacy.

The American Diabetes Association and other organizations participating on the Diabetes Access to Care Coalition have expressed support for a proposal that requires suppliers to furnish the brand of testing strips that works with the monitor selected by the beneficiary and clinician, and to prohibit the supplier from influencing or incentivizing the beneficiary to switch from their current brand of monitor and testing supplies. Additional information about this "anti-switching rule" is found at diabetesaccesstocare.com.

Visit medicare.gov for more information about the CBP. A fact sheet for referral agents can be found at http://www.cms.gov/MLNProducts/downloads/DME_Ref_Agt_Factsheet_ICN900927.pdf. ■



Articles from the U.S.-Mexico Border Diabetes Prevention and Control Project

In September, a special issue of the Pan American Journal of Public Health focused on diabetes along the U.S.-Mexico border. This collection of articles is a product of more than a decade of research associated with the U.S.-Mexico Border Diabetes Prevention and Control Project. The border diabetes project is the first research effort to treat the border as a single epidemiological unit for study of diabetes

prevalence and risk factors. Researchers note that counties and municipalities on both sides of the border share more environmental, cultural and behavioral similarities with one another than they do with their own respective countries.

Findings are based on data collected between 2001 and 2002 in 16 U.S. counties and 28 Mexican municipalities. The project garnered the collective support

of more than 100 government agencies and nongovernmental organizations, healthcare providers, and residents of the 10 contiguous U.S. and Mexican states, including the Texas Department of State Health Services Diabetes Prevention and Control Program.

Visit <http://new.paho.org/journal/> and click on "Diabetes Special Issue." ■

It's Never Too Early...To Prevent Diabetes Gestational Diabetes and Future Risk

In 2007, gestational diabetes occurred in 39 out of every 1,000 live births in Texas (16,127 live births or about 4% of all live births).¹ According to the National Diabetes Education Program (NDEP), women with a history of gestational diabetes have a 35 to 60 percent chance of developing diabetes in the next 10 to 20 years after delivery. Additionally, the children of pregnancies where the mother had gestational diabetes are also at increased risk for obesity and diabetes.

As the Texas Diabetes Council participated in policy roundtable discussions across the state over the last biennium, treatment of women with gestational diabetes and follow-up after birth emerged as issues of concern for many healthcare providers and educators in Texas.

The TDC recommends that preconception counseling, equipment, supplies, and self-management training be provided for women with pre-existing diabetes and expectant mothers with gestational diabetes in order to prevent harm to the child from premature birth, birth defects, and increased risk for obesity and diabetes later in life. At a policy level, coverage gaps have been identified where CHIP perinate benefits pay for the care of the perinate, but not for diabetes equipment and supplies needed for the mother with

gestational diabetes to effectively manage the condition. Women with gestational diabetes may also be foregoing a follow-up glucose test after birth due to out-of-pocket costs. The follow-up glucose test would confirm whether the mother had gestational diabetes that ends with pregnancy, or possibly pre-existing type 2 diabetes that requires further management.

The NDEP recommends that women who have had gestational diabetes:

- get tested for diabetes 6 to 12 weeks after their baby is born, then at least once every 3 years;
- breastfeed to lower their child's risk of being overweight or obese;
- talk to their doctor if they plan to become pregnant again; and
- try to reach pre-pregnancy weight 6 to 12 months after the baby is born. If still overweight, work to lose at least 5 to 7 percent (10 to 14 pounds if weight is 200 pounds) of body weight slowly, over time, and keep it off.

RESOURCES:

- For more information to share with patients on gestational diabetes and future diabetes risk, visit the NDEP web site at <http://www.ndep.nih.gov/am-i-at-risk/gdm/index.aspx>.

- The CDC's newly developed **SPANISH diabetes and pregnancy (pre-gestational and gestational) educational booklets are now available for distribution.** Order online at <http://www2.cdc.gov/ncbddd/faorder/orderform.htm>.



- **WIC Nutrition Topics for High Risk Counseling:** http://www.dshs.state.tx.us/wichd/nut/hr_risk_counseling.shtm.
- **Texas Diabetes Council Diabetes Tool Kit, 5th Edition:** www.tdctoolkit.org.

¹Compiled by: Texas Birth Defects Epidemiology and Surveillance Branch, DSHS. Date: October 25, 2010. Birth data source: Center for Health Statistics, DSHS



TEXAS DIABETES
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www.texasdiabetescouncil.org

Texas Diabetes Council Members

Council members are appointed by the Governor and confirmed by the Senate. Membership includes a licensed physician, a registered nurse, a registered and licensed dietitian, a person with experience in public health policy, three consumer members, four members from the general public with expertise or commitment to diabetes issues, and five state agency representatives who are non-voting members.

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